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| 26181 7590 10/29/2007 FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022 | | | EXAMINER LIN, SHEW FEN | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/800,217

Applicant(s)

JEFFREY, JOEL

Examiner

Shew-Fen Lin

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2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-12 is/are rejected.
- 7) ☐ Claim(s) 4-9, 13-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This action is taken in response to amendments and remarks filed on 7/31/2007.

Terminal Disclaimer

The terminal disclaimer filed on 7/31/2007 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of Patent Nos. 6,493,711 and 6,708,165 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilsenrath et al., ('Hilsenrath' hereinafter), US Pat 5,926,812 in view of James D. Johannes ('Johannes' hereinafter), "Automatic thyroid diagnostics via simulation of physician judgment".

As to claim 1, Hilsenrath disclosed a method for processing information (col. 2, 10-25). Hilsenrath teaches 'receiving a segmented matrix, the segmented matrix being a numerical matrix pairing each of a set of terms to each of a set of classifications' as clusters are collected (receive) into three groups (classification) and clusters in each group are then combined to form a set with three clusters. Any two clusters may be combined by taking the union of their cluster word lists and merging their matrices. Corresponding matrices from the same two clusters are merged. Since the clusters have three words in common, their respective matrices are divided into sub-matrices (col. 5, lines 67 to col. 6, lines 38, Figs. 15-16 et seq). Hilsenrath teaches 'each term being a word or phrase, the segmented matrix having a plurality of information submatrices, each element of each information submatrix representing a rating of a relevance of the term of the element to the classification of the element, each information submatrix being a numerical matrix representing the relevance of each of a subset of the set of terms to each of a subset of the set classifications' as the 4x4 matrix for the first cluster is divided into four sub-matrices: a 3x3 matrix 68 corresponding to the three words it shares with the second cluster, a 1x1 matrix 70 corresponding to the one word it does not share with the second cluster, a 1x3 matrix 72, and a 3x1 matrix 74. Similarly, the second cluster's 5x5 matrix is divided up into four sub-matrices: a 3x3 matrix 76 corresponding to the three words it shares with the first cluster, a 2x2 matrix 78

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corresponding to the two words it does not share with the first cluster, a 3x2 matrix 80, and a 2x3 matrix 82. The first and second matrices are merged to form a 6x6 matrix, as shown. This 6x6 matrix contains a 3x3 matrix 84 whose entries contain the sum of the corresponding entries for 3x3 matrices 68 and 76. It also contains a 1x1 matrix 86 corresponding to the 1x1 matrix (relevance) 70 from the first cluster, a 2x2 matrix 88 corresponding to the 2x2 matrix 78 from the second cluster, a 3x1 matrix 90 and a 1x3 matrix 92 corresponding to the 3x1 matrix 74 and the 1x3 matrix 72, and a 3x2 matrix 94 and a 2x3 matrix 96 corresponding to the 3x2 matrix 80 and the 2x3 matrix 82 (col. 6, lines 17-36, Fig. 16). Finally, Hilsenrath teaches 'using the segmented matrix to calculate an information spectrum' as the cluster word list is determined by recursively calling a procedure that returns a list of words within a predetermined distance from a given word in the document, and calculating the number of connections matrix by repeatedly calling a procedure that determines the number of connections in the document between words (col. 2, lines 18-24, Fig. 12 et seq). Hilsenrath does not particularly indicate that the matrix used is a judgment matrix. However, Johannes discloses a judgment matrix in correlated documents at (pages 25-29 et seq). It would have been obvious to one ordinary skill in the art of data processing information, at the time of the present invention was made to combine the teachings of the cited references because the judgment matrix of Johannes's system would allow users of Hilsenrath's system to retrieve relevant documents based on their level of correlation with a requested documents, as explained in Johannes (pages 25-29 et seq).

As to claim 2, Hilsenrath teaches 'at least some of the elements of the information submatrices represent ratings of relevance made by a human being' as (Figs. 12, 16)

As to claim 3, Hilsenrath teaches 'the segmented matrix has rows and columns and each column of the segmented matrix represents a classification and each row of the segmented judgment matrix represents a term' as (Figs. 15-16).

As to claim 10, a computer program product comprising instructions operable to cause data processing (col. 2, 10-25). Hilsenrath teaches 'receive a segmented matrix, the segmented matrix being a numerical matrix pairing each of a set of terms to each of a set of classifications' as clusters are collected (receive) into three groups (classification) and clusters in each group are then combined to form a set with three clusters. Any two clusters may be combined by taking the union of their cluster word lists and merging their matrices. Corresponding matrices from the same two clusters are merged. Since the clusters have three words in common, their respective matrices are divided into sub-matrices (col. 5, lines 67 to col. 6, lines 38, Figs. 15-16 et seq). Hilsenrath teaches 'each term being a word or phrase, the segmented matrix having a plurality of information submatrices, each element of each information submatrix representing a rating of a relevance of the term of the element to the classification of the element, each information submatrix being a numerical matrix representing the relevance of each of a subset of the set of terms to each of a subset of the set classifications' as the 4x4 matrix for the first cluster is divided into four sub-matrices: a 3x3 matrix 68 corresponding to the three words it shares with the second cluster, a 1x1 matrix 70 corresponding to the one word it does not share with the second cluster, a 1x3 matrix 72, and a 3x1 matrix 74. Similarly, the second cluster's 5x5 matrix is divided up into four sub-matrices: a 3x3 matrix 76 corresponding to the three words it shares

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with the first cluster, a 2x2 matrix 78 corresponding to the two words it does not share with the first cluster, a 3x2 matrix 80, and a 2x3 matrix 82. The first and second matrices are merged to form a 6x6 matrix, as shown. This 6x6 matrix contains a 3x3 matrix 84 whose entries contain the sum of the corresponding entries for 3x3 matrices 68 and 76. It also contains a 1x1 matrix 86 corresponding to the 1x1 matrix (relevance) 70 from the first cluster, a 2x2 matrix 88 corresponding to the 2x2 matrix 78 from the second cluster, a 3x1 matrix 90 and a 1x3 matrix 92 corresponding to the 3x1 matrix 74 and the 1x3 matrix 72, and a 3x2 matrix 94 and a 2x3 matrix 96 corresponding to the 3x2 matrix 80 and the 2x3 matrix 82 (col. 6, lines 17-36, Fig. 16).

Finally, Hilsenrath teaches 'using the segmented matrix to calculate an information spectrum' as the cluster word list is determined by recursively calling a procedure that returns a list of words within a predetermined distance from a given word in the document, and calculating the number of connections matrix by repeatedly calling a procedure that determines the number of connections in the document between words (col. 2, lines 18- 24 et seq). Hilsenrath does not particularly indicate that the matrix used is a judgment matrix. However, Johannes discloses a judgment matrix in a correlated documents at (pages 25-29 et seq). It would have been obvious to one ordinary skill in the art of data processing information, at the time of the present invention was made to combine the teachings of the cited references because the judgment matrix of Johannes's system would allow users of Hilsenrath's system to retrieve relevant documents based on their level of correlation with a requested documents, as explained in Johannes (pages 25-29 et seq).

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As to claim 11, Hilsenrath teaches 'at least some of the elements of the information submatrices represent ratings of relevance made by a human being' as (Figs. 12, 15-16).

As to claim 12, Hilsenrath teaches 'the segmented matrix has rows and columns and each column of the segmented matrix represents a classification and each row of the segmented judgment matrix represents a term' as (Figs. 15-16 et seq).

Allowable Subject Matter

Claims 4-9, 13-18 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art of record does not teach or fairly suggest the elements whereby receiving the search request the segmented matrix to calculate an information spectrum for each of a plurality of documents comprises calculating an information spectrum for each of the plurality of documents based upon at least some of the plurality of terms and selecting the plurality of terms based upon a relevance of each term of the plurality of terms to at least some of the classifications of the information submatrices.

Response to Remarks

Applicant's amendments and remarks have been fully and carefully considered. In response, a new ground of claim analysis based on previously relied on reference has been considered, but they are not deemed to be persuasive.

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Applicant argues that the limitation “segmented judgment matrix” is found in the claims in the allowed ‘165 patent which successfully overcome the prior references and alleged that the same references would not be applicable for rejecting a limitation of instant application.

In response, the Examiner respectfully submits that in order for claim limitations to overcome prior arts all the claimed elements are considered as a whole not just a specific feature. In the instant application, Hilsenrath teaches dividing matrix into submatrix (segmented matrix) and Johannes teaches using judgment matrix in a correlated documents, as such, the combination of Hilsenrath and Johannes clearly teach the limitation of “segmented judgment matrix”.

Applicant argued that, by providing computer-implemented method for comparing text data of documents, Hilsenrath reference teaches away Johannes’ disclosure of an artificial intelligence system using physician’s judgment to render a diagnosis, and Applicant seemed suggesting the two references are not of analogous art.

In response, the Examiner respectfully submits that Johannes discloses symptoms, diagnosis which are in some form of text data enter by experts/physician, which are equivalent to textual data of two documents. An artificial intelligence system (i.e. judgment) is used to find the relevant between documents and does not teaches away the disclosure of Hilsenrath reference. Applicants are also reminded that in order to disqualify a reference based on a “teach away” reasoning, the reference has to explicitly suggest or disclose the so-called teach away steps – Applicants assertion can not be accepted if it is unsupported by a valid evidence.

Applicant argued that Johannes does not teach or suggest the use of a segmented judgment matrix as claimed.

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In response, the Examiner respectfully submits that Hilsenrath discloses “segment matrix” as the 4x4 matrix for the first cluster is divided into four sub-matrices: a 3x3 matrix 68 corresponding to the three words it shares with the second cluster, a 1x1 matrix 70 corresponding to the one word it does not share with the second cluster, a 1x3 matrix 72, and a 3x1 matrix 74. Similarly, the second cluster's 5x5 matrix is divided up into four sub-matrices: a 3x3 matrix 76 corresponding to the three words it shares with the first cluster, a 2x2 matrix 78 corresponding to the two words it does not share with the first cluster, a 3x2 matrix 80, and a 2x3 matrix 82. The first and second matrices are merged to form a 6x6 matrix, as shown. This 6x6 matrix contains a 3x3 matrix 84 whose entries contain the sum of the corresponding entries for 3x3 matrices 68 and 76. It also contains a 1x1 matrix 86 corresponding to the 1x1 matrix (relevance) 70 from the first cluster, a 2x2 matrix 88 corresponding to the 2x2 matrix 78 from the second cluster, a 3x1 matrix 90 and a 1x3 matrix 92 corresponding to the 3x1 matrix 74 and the 1x3 matrix 72, and a 3x2 matrix 94 and a 2x3 matrix 96 corresponding to the 3x2 matrix 80 and the 2x3 matrix 82 (col. 6, lines 17-36, Fig. 16).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

October 23, 2007

Shew-Fen Lin
Patent Examiner
Art Unit 2166

SFL


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER